

Environmental Product Declaration

In accordance with ISO 14025 for:

TAÇ Reborn Yarn (from %100 Re-PET) (Post-consumer) from KORTEKS

Programme:

The International EPD[®] System, www.environdec.com
EPD Turkey, www.epdturkey.org

Programme operator:

EPD International AB & EPD Turkey

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10.10.2026

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

KORTEKS



Programme	EPD Turkey, a fully aligned regional programme.	The International EPD® System
	www.epdturkey.org	www.environdec.com
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Geographical Scope	Global	
UN CPC Code	264 (Textile yarn and thread of man-made filaments or staple fibres.)	



Programme Information

Programme

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Product Category Rules (PCR)

PCR 2013:12 Textile yarn and thread of natural fibres, man-made filaments or staple fibres, version 2.11

Independent third-party verification of the declaration and data, according to ISO 14025:2006

EPD process certification ()
EPD verification (**X**)

Third party verifier

Professor Vladimír Kocí

Approved by

The International EPD® System

Procedure for follow-up of data during EPD validity involves third party verifier

Yes ()
No (**X**)

The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPDs for textile products are primarily intended for use in B2B communication, but their use in B2C communication under certain conditions is not precluded. For EPDs intended for B2C communication, refer to ISO 14025.

About Company

Established in 1989 to meet the high-quality polyester yarn needs of the Turkish textile industry, Korteks is one of the world's most important, largest, integrated, and innovative polyester yarn production centers. In addition to the domestic market, it exports its products to more than 50 countries including Germany, Italy, England, the USA, Canada, Mexico, China.

Having an annual production capacity of 170,000 tons, Korteks produces thousands of different types of polyester filament yarns and can differentiate itself from the competition with its product variety. Korteks is one of the leading production facilities in Turkey, especially in the field of technical textiles, thanks to its competent and experienced human resources. The factory has been designed to allow for the production of high quality filament yarns and features such as "high count & micro count". These highly competitive products are used in different fields including automotive, health, outdoor, industrial textiles, carpets, fleece, top and sportswear. Korteks offers super-bright, semi-dull polyester textile chips and super-bright/dull/semi-dull/full dull ecru and polymer-dyed polyester POY, FDY, textured, elasthan, air-textured, plain, bobbin-dyed and twisted, monofilament yarns under the brand name TAÇ.

Having an R&D team that researches and offers new solutions, Korteks has also been a pioneer in many polyester yarn technologies worldwide. As a company that aims to grow through customer-oriented, innovative, and value-added products, Korteks also has intensively invested in R&D. The most prominent products that have been developed are: TAÇ Antistatic, preventing all kinds of static electricity, dust collection and adhesion to the human body; TAÇ UV Resistant, developed for outdoor fabrics such as awnings, tarpaulins, garden furniture; TAÇ Flame Retardant yarns, offering flame retardancy, DRY TOUCH®; a certified performance fabric brand that facilitates moisture management.

Developing many products for the automotive industry, Korteks offers fast, flexible, and reliable service by working in continuous cooperation with customers from the design stage to mass production of automotive fabric projects. Today, the yarns produced in this respect are used in the projects of the world's largest automobile brands by domestic and foreign fabric manufacturers.

Being the technology base in polyester yarn production, Korteks will continue to penetrate into new markets with the yarns it has developed.



CERTIFICATION



SUSTAINABLE



KORTEKS

Product Information



As Korteks, the largest integrated polyester yarn production center in Europe, we dream for a sustainable world and make all endeavors to deliver better tomorrows that rely on innovative and technological advancements in line with Zorlu Holding’s vision of “Smart Life 2030”. And, accordingly, we take our pride in achieving another breakthrough moment in Turkey with the Polymer Recycling Plant which would allow us to produce Taç Reborn from plastic bottles.

At the Polymer Recycling Plant, we are producing RPET Chips, the raw material of the TAÇ Reborn, extracted from the waste plastic bottles, a non-biodegradable product capable of inducing negative environmental impact by uncontrollably remaining in the nature for prolonged periods, and other yarns discarded as production wastes to obtain a recyclable product, the filament polyester yarn.

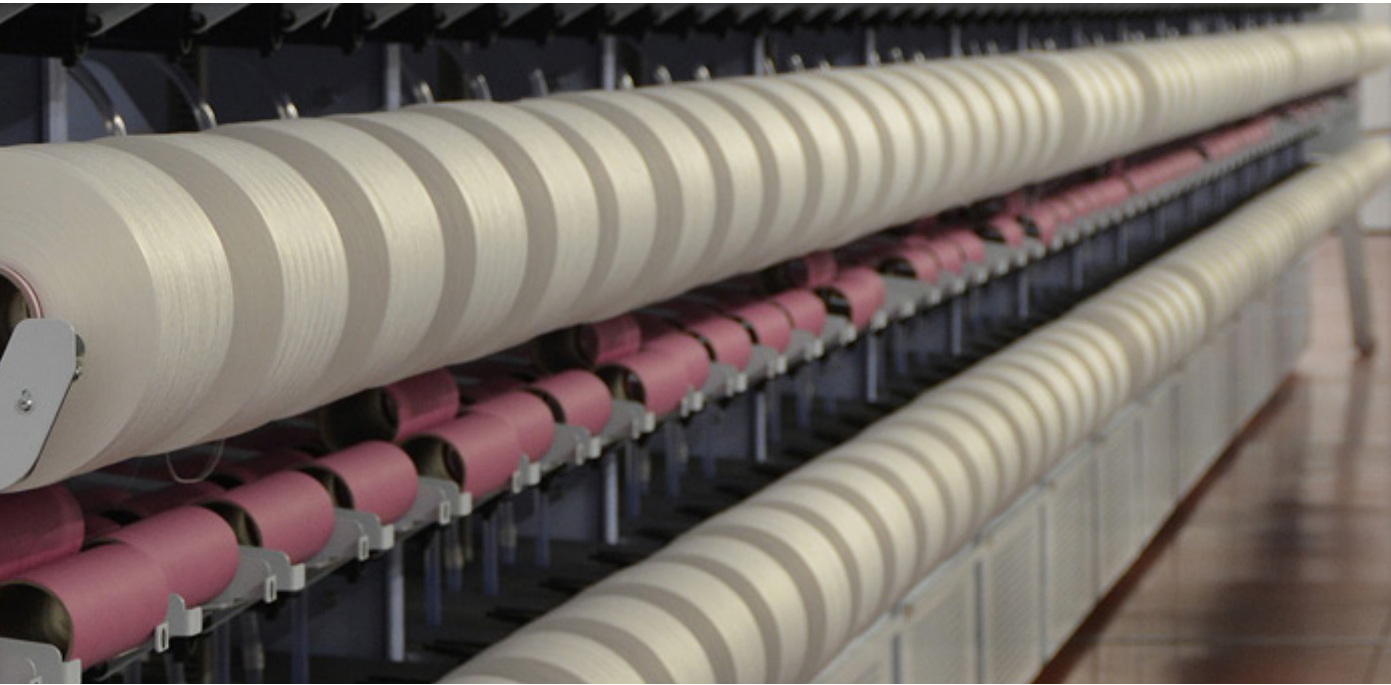


Thanks to this innovative recycling process, we not only save energy as the process requires less energy when compared to the traditional production practices, but also endorse reduction of greenhouse gas emissions. Therefore, we support recycling processes through circular economy while also contributing to build a sustainable future in the long run.

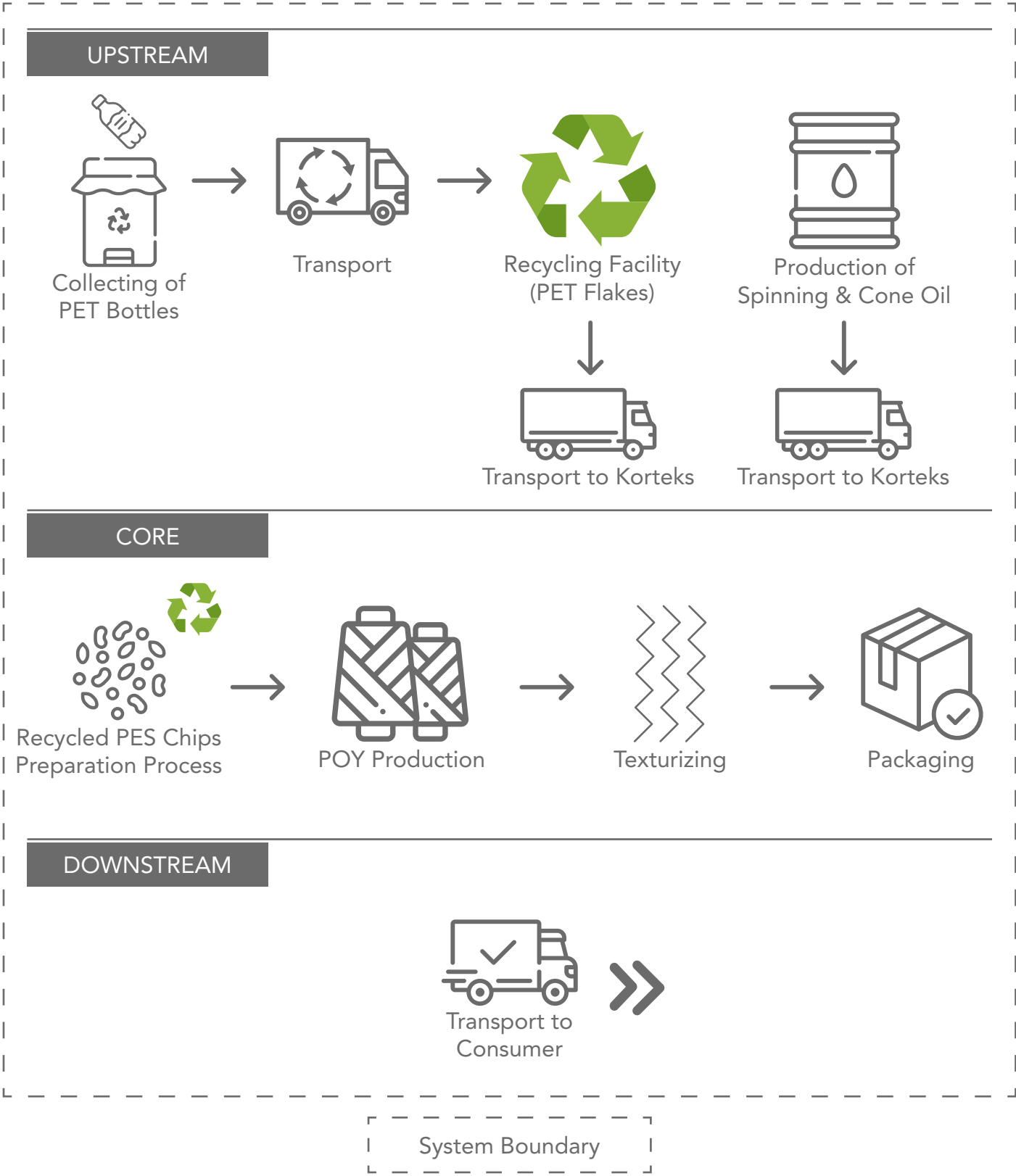


LCA Information

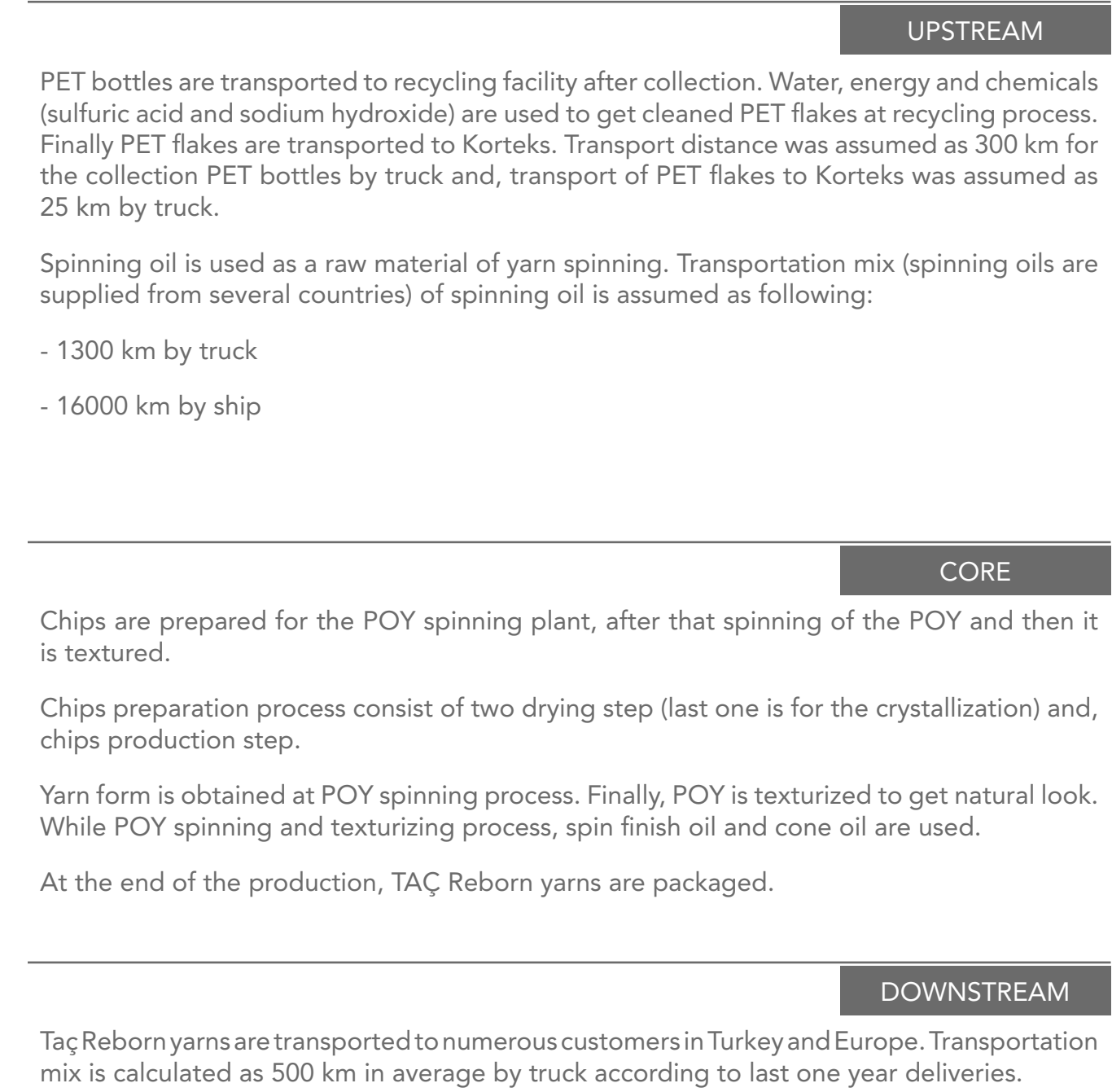
Functional Unit	1 kg of TAÇ Reborn Yarn (from %100 Re-PET) (Post-consumer) / Texturized
Time Representativeness	2021
Database(s) and LCA Software Used	Ecoinvent 3.6, TLCID (Turkish Lifecycle Inventory Database) and SimaPro 9.1
System Boundaries	Cradle to Gate <ul style="list-style-type: none">- Production of raw materials- Transport of raw materials- Production- Trnasport of product
Allocation	No allocation performed
Cut-Off Rules	No cut-off rule was applied within the LCA study underlying this EPD.



System Boundary



System Description



ENVIRONMENTAL PERFORMANCE

POTENTIAL ENVIRONMENTAL IMPACT

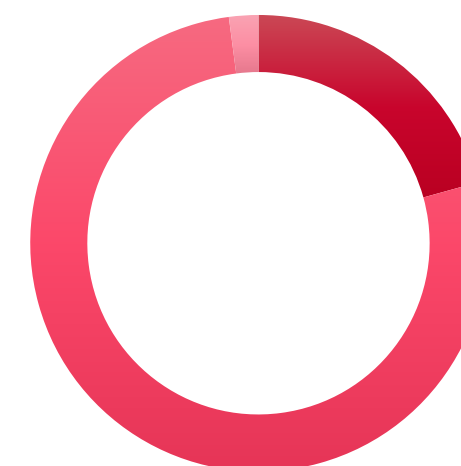
	Parameter	Unit	Upstream	Core	Downstream	Total
Global warming potential (GWP)	Fossil	kg CO ₂ eq.	0.82	3.06	82.7 x10 ⁻³	3.96
	Biogenic	kg CO ₂ eq.	0.98 x10 ⁻³	6.4 x10 ⁻³	20 x10 ⁻⁶	7.4 x10 ⁻³
	Land use and transformation	kg CO ₂ eq.	1.47 x10 ⁻³	16.9 x10 ⁻³	24.3 x10 ⁻⁶	18.4 x10 ⁻³
	Total	kg CO ₂ eq.	0.83	3.08	82.8 x10 ⁻³	3.99
	Depletion potential of the stratospheric ozone layer (ODP)	kg CFC-11 eq	0.17 x10 ⁻⁶	0.11 x10 ⁻⁶	15.2 x10 ⁻⁹	0.29 x10 ⁻⁶
	Acidification potential (AP)	kg SO ₂ eq.	4.33 x10 ⁻³	15.3 x10 ⁻³	0.3 x10 ⁻³	19.9 x10 ⁻³
	Eutrophication potential (EP)	kg PO ₄ ³⁻ eq	3.79 x10 ⁻³	9.27 x10 ⁻³	61.8 x10 ⁻⁶	13.1 x10 ⁻³
	Photochemical oxidant formation potential (POFP)	kg NMVOC	3.06 x10 ⁻³	7.54 x10 ⁻³	0.3 x10 ⁻³	10.9 x10 ⁻³
	Abiotic depletion potential – Elements	kg Sb eq	7.79 x10 ⁻⁶	0.98 x10 ⁻⁶	0.25 x10 ⁻⁶	9.02 x10 ⁻⁶
	Abiotic depletion potential – Fossil resources	MJ, net calorific value	12.2	34.9	1.25	48.3
	Water scarcity potential	m ³ eq	0.47	2.3	8.71E-03	2.78

Global Warming Potential was calculated using IPCC 2013 method with a timeframe of 100 years. Eutrophication, Abiotic Depletion Fossil Fuels and Abiotic Depletion Elements were calculated with CML 2001 baseline method. Acidification was calculated using fate not included version in CML 2001 non-baseline method. Photochemical Oxidant Formation potential was calculated with POFP, LOTOS-EUROS as applied in ReCiPe 2008. Water Scarcity was calculated with AWARE method.



Global Warming Potential

- 20.7% of GWP comes from upstream (raw material production and transport)
- 77.2% of GWP comes from core processes (core production processes)
- 2.1% of GWP comes from downstream (transport of end product)

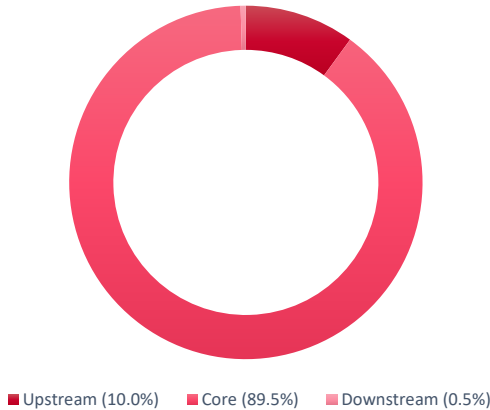
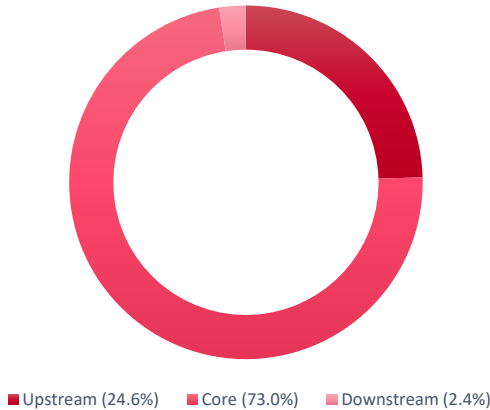


■ Upstream (20.7%) ■ Core (77.2%) ■ Downstream (2.1%)

USE OF RESOURCE

Parameter		Unit	Upstream	Core	Downstream	Total
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value	0.2	2.55	5 x10 ⁻³	2.8
	Used as raw materials	MJ, net calorific value	0	0	0	0
	Total	MJ, net calorific value	0.2	2.55	5 x10 ⁻³	2.8
Primary energy resources – Non-renewable	Use as energy carrier	MJ, net calorific value	12.7	35.7	1.27	49.7
	Used as raw materials	MJ, net calorific value	0	0	0	0
	Total	MJ, net calorific value	12.7	35.7	1.27	49.7
Secondary material		kg	1.19	0	0	1.19
Renewable secondary fuels		MJ, net calorific value	0	0	0	0
Non-renewable secondary fuels		MJ, net calorific value	0	0	0	0
Net use of fresh water		m ³	4 x10 ⁻³	40 x10 ⁻³	0.2 x10 ⁻³	45 x10 ⁻³

Energy calculations were obtained using Cumulative Energy Demand (LHV) v 1.00, which is present in SimaPro’s latest version. Net freshwater used was calculated from the life cycle inventory results.



WASTE PRODUCTION

Parameter	Unit	Upstream	Core	Downstream	Total
Hazardous waste disposed	kg	0	0.27	0	0.27
Non-hazardous waste disposed	kg	0.28	0.26	0	0.54
Radioactive waste disposed	kg	0	0	0	0

Hazardous and Non-Hazardous waste amounts are allocated from yearly total waste amounts.

OUTPUT FLOWS

Parameter	Unit	Upstream	Core	Downstream	Total
Components for reuse	kg	0	0	0	0
Material for recycling	kg	0	0	0	0
Materials for energy recovery	kg	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0

Output flow amounts are allocated from yearly total waste amounts.

TOXICITY IMPACTS

Parameter	Unit	Upstream	Core	Downstream	Total
Human toxicity, cancer	cases	1.58 x10 ⁻⁶	0.22 x10 ⁻⁶	2,30 x10 ⁻⁹	1.81 x10 ⁻⁶
Human toxicity, non-cancer	cases	0.56 x10 ⁻⁶	0.56 x10 ⁻⁶	11.5 x10 ⁻⁹	1.12 x10 ⁻⁶
Freshwater ecotoxicity	PAF.m3.day	37.8 x10 ³	25.1 x10 ³	0.13 x10 ³	63 x10 ³

Toxicity impacts were calculated using USEtox v 2.02 recommended + interim.

References

Ecoinvent

Ecoinvent Centre, www.ecoinvent.org

EN 15804:2012+A2:2019

Sustainability of construction works - Environmental Product Declarations — Core rules for the product category of construction products

ELCD Database

European Platform on Life Cycle Assessment, <https://eplca.jrc.ec.europa.eu/ELCD3/>

EN ISO 9001

Quality Management Systems - Requirements

EN ISO 14001

Environmental Management Systems - Requirements

GPI

General Programme Instructions of the International EPD® System. Version 3.0.

ISO 45001

Occupational Health & Safety Management System - Requirements

ISO 14020:2000

Environmental Labels and Declarations — General principles

ISO 14025 DIN EN ISO 14025:2009-11

Environmental labels and declarations - Type III environmental declarations — Principles and procedures

ISO 14040/44/ DIN EN ISO 14040:2006-10

Environmental management - Life cycle assessment - Principles and framework (ISO14040:2006) and Requirements and guidelines (ISO 14044:2006)

Shen, L., Worrell, E., & Patel, M. K. (2010)

Open-loop recycling: A LCA case study of PET bottle-to-fibre recycling. Resources, conservation and recycling, 55(1), 34-52.

Shen, L., Nieuwlaar, E., Worrell, E., & Patel, M. K. (2011)

Life cycle energy and GHG emissions of PET recycling: change-oriented effects. The International Journal of Life Cycle Assessment, 16(6), 522-536.

SimaPro

SimaPro LCA Software, Pré Consultants, the Netherlands, www.pre-sustainability.com

The International EPD® System

The International EPD® System is a programme for type III environmental declarations, maintaining a system to verify and register EPD®s as well as keeping a library of EPD®s and PCRs in accordance with ISO 14025. www.environdec.com

Contact Information

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